Fuze T50 Power Tilt Manual

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Please refer to components labels for specific electrical requirements.

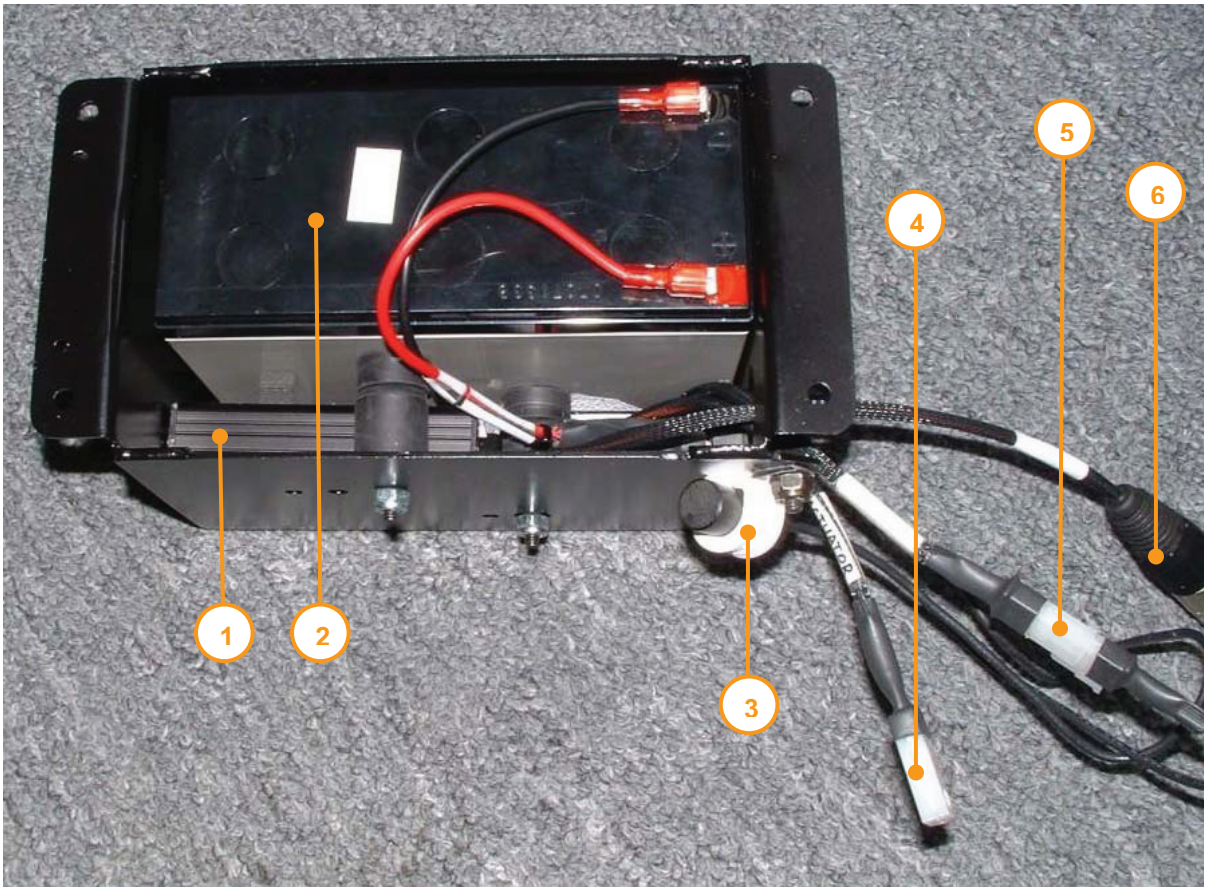
Component Overview

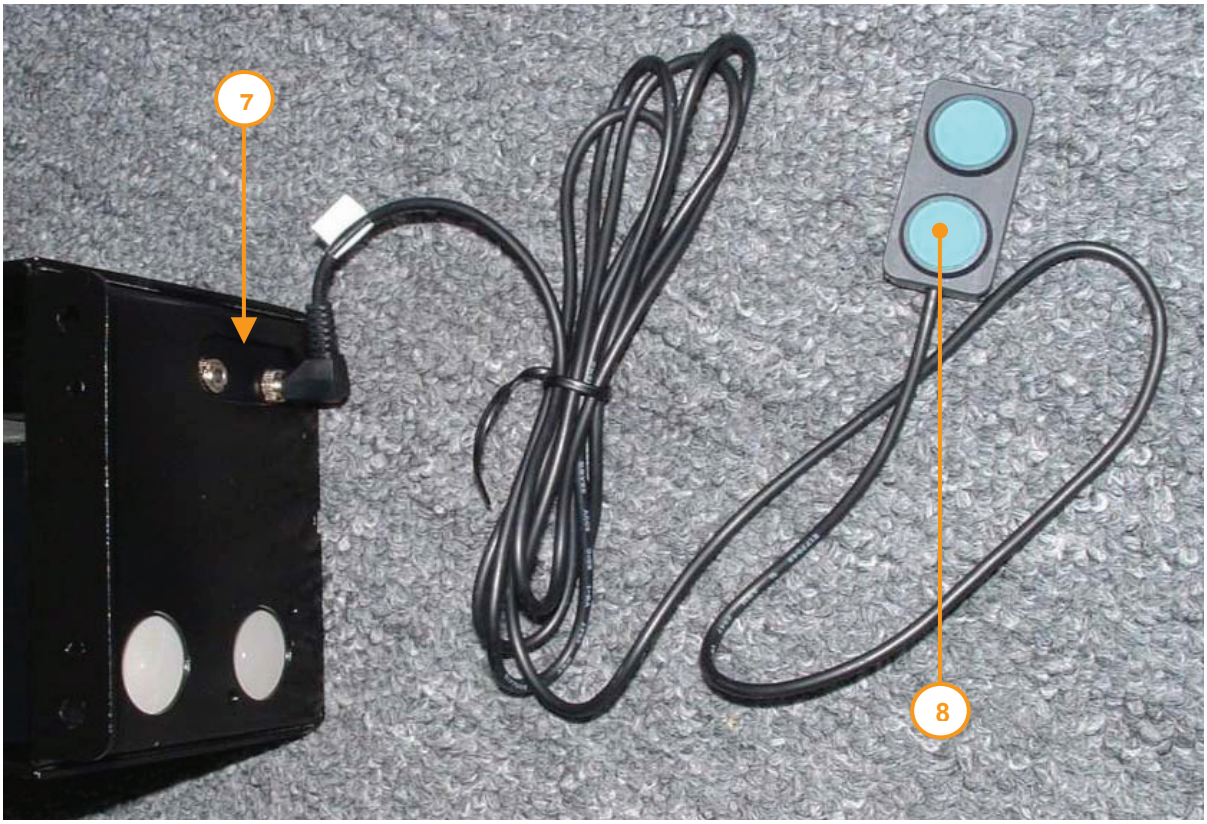
Powertilt Components:

1. Controller
2. Battery
3. Tilt Limiter
4. Actuator Connector
5. Tilt Limiter Connector
6. Power Plug
7. Stereo Plug for single or dual Input Switches
8. Input Switch
9. Actuator
10. Battery Box
11. Charger
12. Charger Plugs
13. Charger Connector
14. Charger Fuse
15. Charger Socket
16. Actuator Mounting Block
17. Seat Pan with pre-drilled holes (not shown in pictures)
18. T20 Upper Strut Mount (see Figure @@)

Fasteners:

4 x (10-32 x 1/2"L) Button Head Screw
2 x (1/4” x 2L) Shoulder Bolt
1 x (3/8” x 1 1/2"L) Button Head Screw
1 x (5/16" x 3/4" x 5/16") Thick Spacer Black Nylon
4 x 10-32 nuts
2 x 1/4" nuts
1 x 3/8” nut

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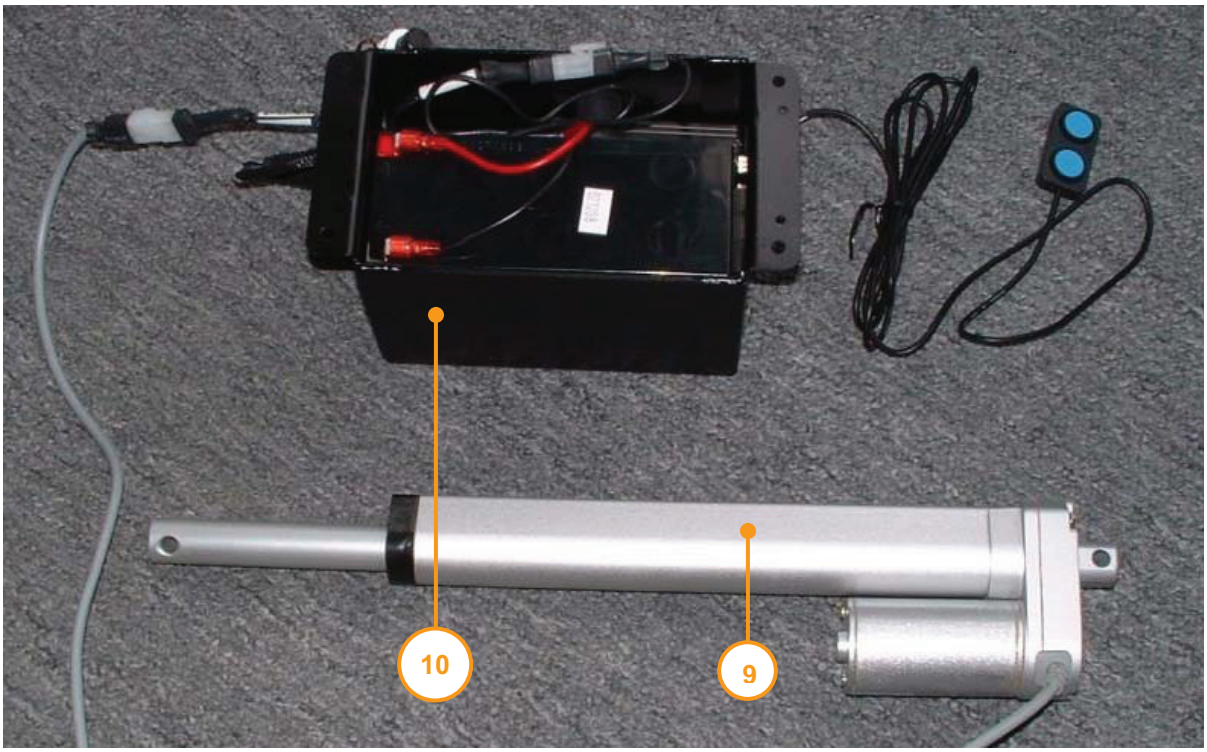
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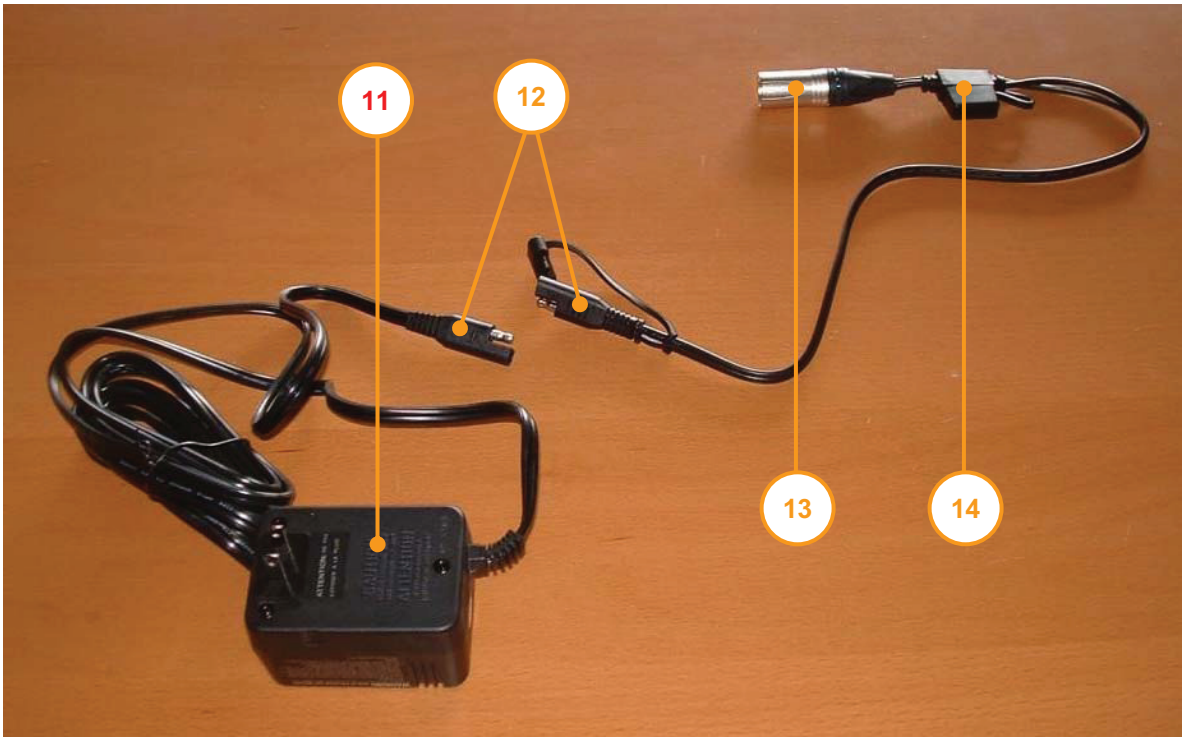
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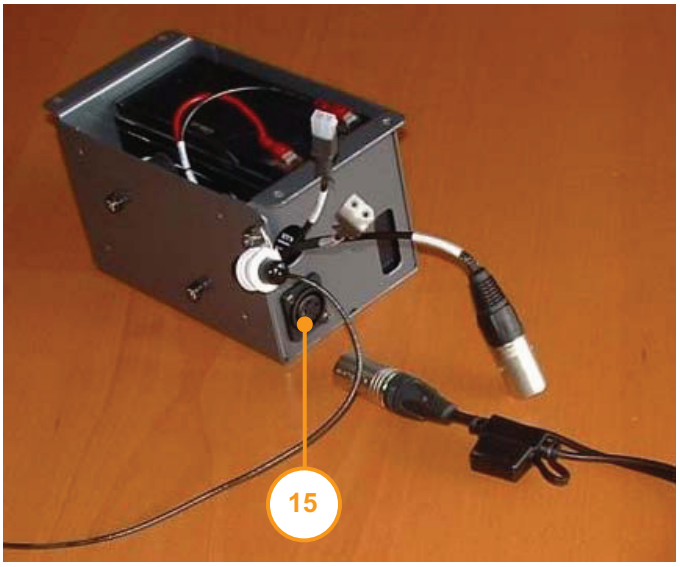
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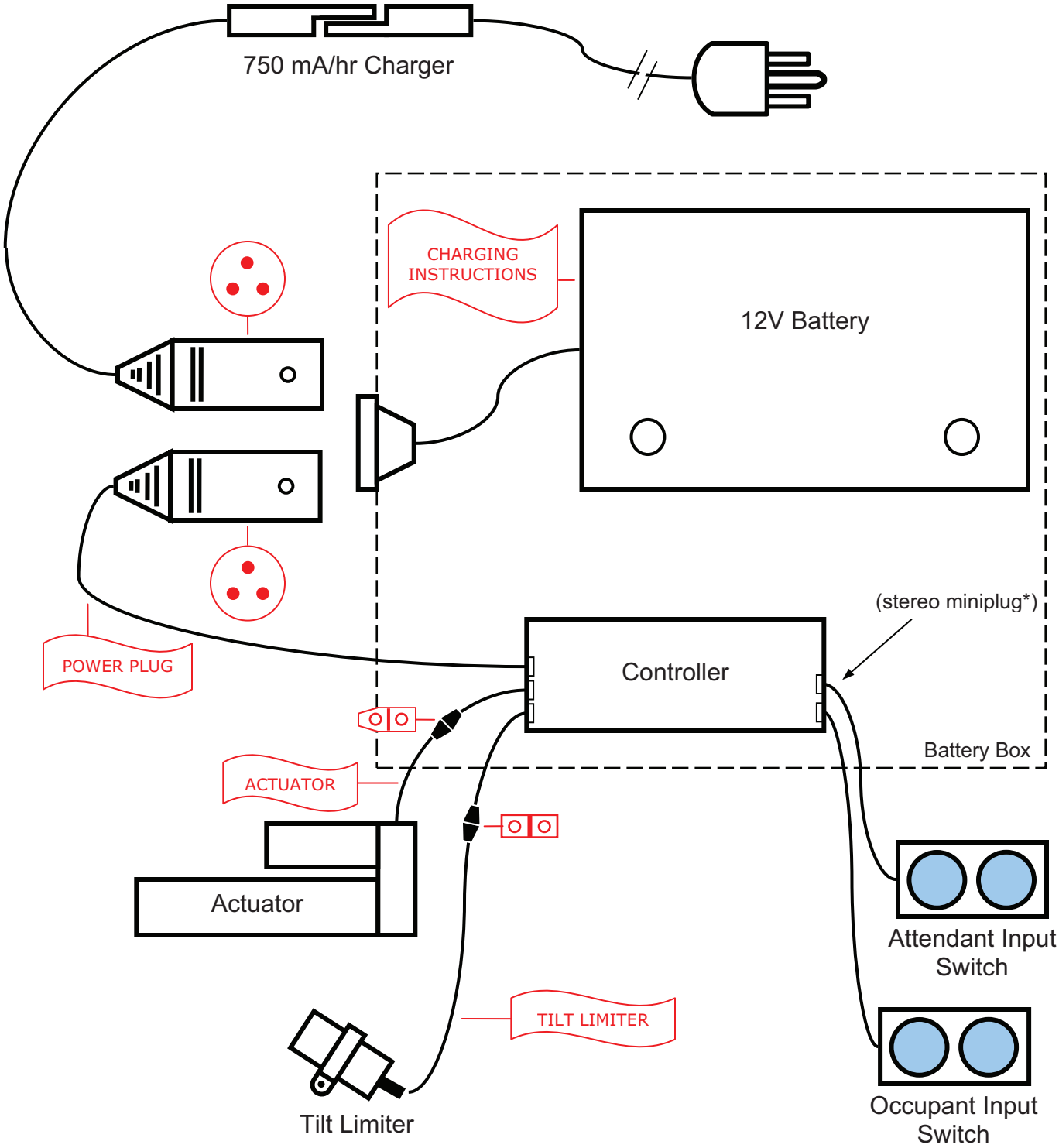
Connector & Labelling Diagram



** Mono plugs are not compatible. Use a converter!*

Setting up the Powertilt

Checking the Components

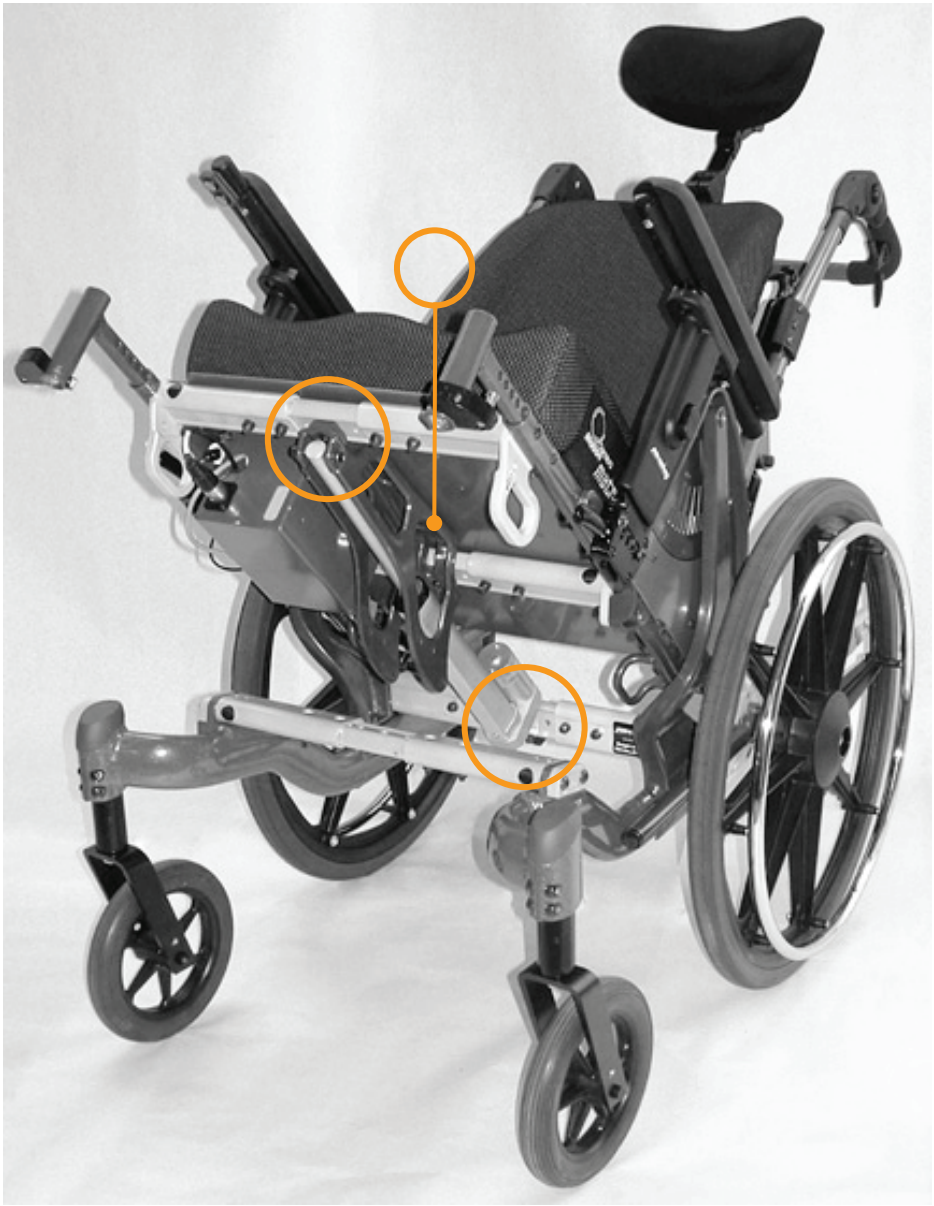
Before mounting the Actuator (9) and the Battery Box (10) to the chair:

- Check that every component and fastener is included in the package,
- Check that the extra Seat Pan (17) has pre-drilled holes for mounting the Battery Box,
- Check that the Controller (1) and the Battery (2) are fixed in the Battery Box (see upper picture) and the Batteries exiting wires (red and black) are connected to the Charger Socket (15),
- Check that the Tilt Limiter Connector (5) is plugged into the matching connector that exits the Controller and that those wires are lined up inside the Battery Box,
- Check that the Actuator Connector (4) and the Power Plug (6) are exiting the Battery Box and not plugged in, according to upper picture,
- Replace the Seat Pan with the new one (pre-drilled holes) and replace the Upper Strut Mount with the new T20-style one (18). Remove and re-install the rear lower crossbar, between the lower frame pivot arms, so that the large flat on the inner crossbar part faces forward. Make sure to use the same mounting holes. Place the Seat Pan so that the Battery Box will be mounted on the left side of the Actuator, when the wheel chair is viewed from the front.

Mounting the Actuator

Tilt the chair, so the back of the seat is on the ground. Place the Actuator (9) in between the Upper and Lower Frame and let it rest on the mounting spots A and B.

A. Install the Actuator Mounting Block (16) to the rear Cross Bar of the Lower Frame so that the actuator mounting hole is below the center line of the cross bar (The Mounting Block can be mounted up-side-down). Use a 3/8” x 1 1/2"L Hex Head Screw (see picture) inserted so that the head of the fastener is closest to the actuator. Ensure that the Actuator sits as low as possible and that the motor on the actuator is closer to the seat pan, not the ground, when the chair is resting on all four of its wheels. Mount the Actuator to the Actuator Mounting Block using a 1/4” x 2L Shoulder Bolt (Spacers are used to prevent end float).
B. Mount the Actuator to the T20 Upper Strut Mount (18) using a 1/4” x 2L Shoulder Bolt (see picture).



Mounting the Battery Box

The Battery Box (10) is mounted onto the Seat Pan (17), in between the two crossbars.
Place the Battery box up against the Seat Pan, with the Power Plug (6) facing forward. Line up the holes in the Battery Box with the ones in the Seat Pan and fasten the Battery Box using the 10-32 x 1/2"L Button Head Screws.

Connecting the components

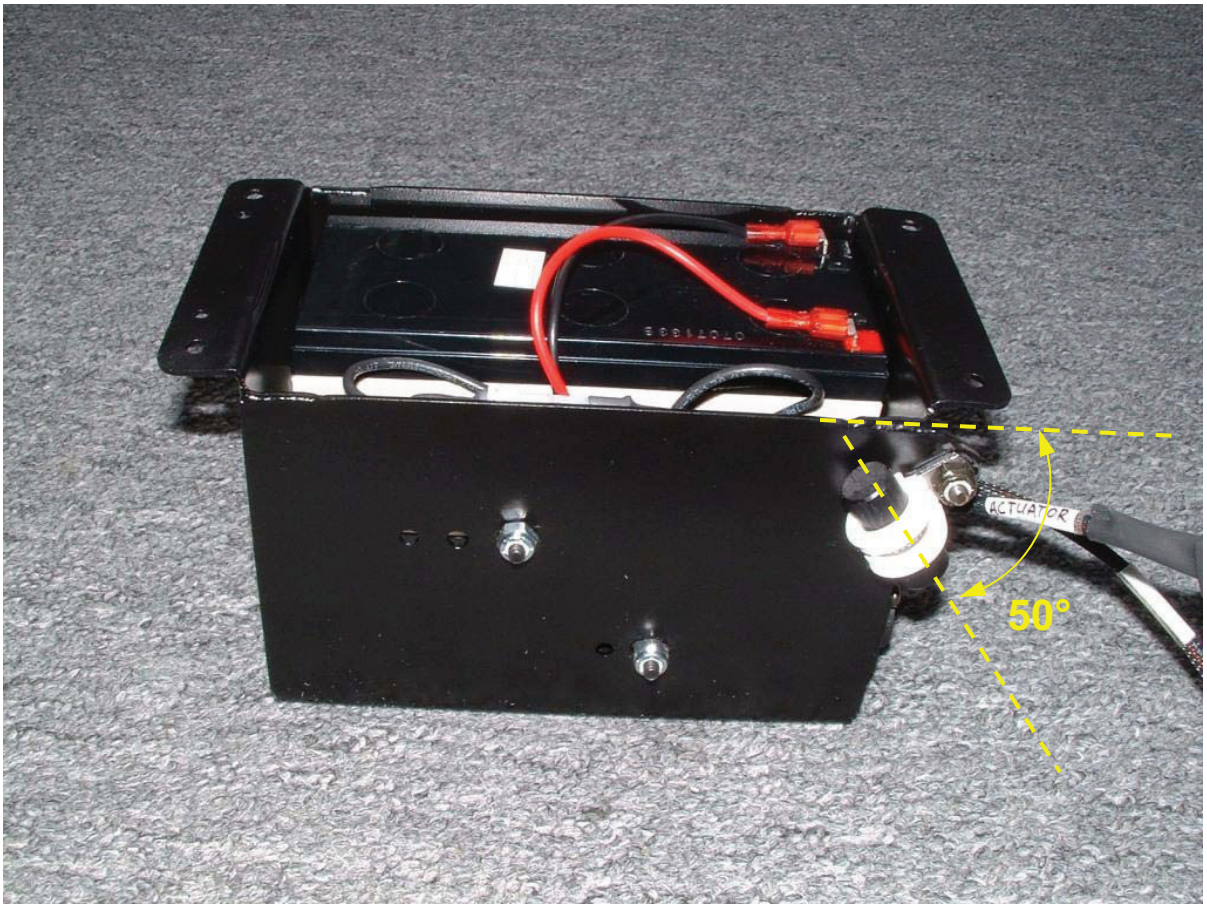
- Connect the Actuator Connector (4) to the matching exiting Controller Plug and tuck the connector and any excess cord into the Battery Box.
- Connect the Input Switch(es) (8) in the matching stereo plug(s) on the back of the Battery Box (10)
- Connect the Power Plug (6) in the matching plug on the front of the Battery Box

Setting up the Tilt Limiter

The Tilt Limiter (3) defines how much the seat can be tilted. It can be set by rotating it around the fastener with which it is attached to the Battery Box. The angle, at which the Tilt Limiter is set, is 1-to-1 with the maximum amount of tilt. When the tilt limiting switch is oriented so that the wire is exiting the switch downwards the connection is made and the chair will tilt.Once the Tilt Limiter levels or the wire is exiting upwards then the connection is broken and the actuator will only retract.

To have 50° of tilt (maximum on Fuze T50), set the Tilt Limiter at or beyond a 50° angle in reference to the upper edge of the Battery Box (see picture).

At both ends of the tilt the mechical limits of the actuator will prevent tilting beyond the base specifications of the chair.



Using the Powertilt

Use the Occupant and/or Attendant Input Switch (8) to operate the tilt. The Input Switch has two buttons, one for up, the other for down. If the chair is outfitted with an Occupant and an Attendant Input Switch, then the one operated first is active.

Tilting the seat

Press the button furthest from the wire. When the button is released, tilting stops. To return the seat to the upright position, press the other button. Note that the tilt limiter uses gravity as its frame of reference so if the chair is not on a horizontal surface less or more tilt may be possible.

When the tilt limiter trips or the actuator reaches its maximum extension tilting will stop. The tilt button will not work when the seat is at the maximum tilt.

Charging

- The Battery and the Charger only work on 120 VAC.
- The Battery can be charged any time.
- As long as the Battery is charging, the Powertilt will not work.
- It takes approximately 10 hours to fully charge the Battery.

- Do not unplug the Charger Plugs (12) when the Battery is charging, or when the Charger is still left in the main power outlet.
- Always first disconnect the Charger (11) from the main power outlet, before unplugging the Charger Connector (13) from the Battery Box.
- Consult the Charger documentation for further information.

Charging the battery

- Connect the Charger Plugs (12).
- Unplug the Power Plug (6) from the Battery Box (10) and plug in the Charger Plug.
  The Powertilt will not work while the Battery is charging.
- Plug in the Charger (11) to the main power outlet.

Status Indicator Lights

The indicator light is located on the front side of the Charger. Note that the BT Junior charger has a single light that will shine either red or green, while the BT Plus has two separate light, one red and one green.

- **Neither the red or green light turns on**.
  This is an abnormal condition and most likely indicates that the charger is not properly connected to the AC power.
- **Red light flashing**.
  The red light flashing indicates that the battery charger has AC power available and that the microprocessor is functioning properly. If the red light continues to flash, then either the battery voltage is too low (less than 3 volts) or the output alligator clips or accessory ring terminals are not connected correctly.
- **Red light on steady**.
  Whenever the red light is on steady, a battery is connected properly and the charger is charging the battery. The red light will remain on until the charger completes the charging stage.
- **Green light flashing**.
  When the green light is flashing, the battery is greater than 80% charged. For BT Plus models the red light will also be on steady. (note: Does not apply to the 8V Plus or the 6V Junior).
- **Green light on steady**.
  When the green light stops flashing and burns steady, the charge is complete and the battery can be returned to service if necessary.
- **Alternating red & green lights flashing (Plus) or single light orange (Junior).**
  This is abnormal and most likely indicates either that the battery is sulphated or that there is a poor electrical connection between the charger CD output and the battery posts. For the BT Plus models is may indicate a reverse polarity connection on the CD output cables (the battery is hooked up backwards).

Reconnecting the Powertilt

- The Battery is fully charged, when the light on the Charger is a steady green. When the light is green flashing, the battery is 80% charged. The Powertilt can be used when 80% charged, but will be reduced. To ensure maximum battery life it is advisable is to let the Battery charge fully.
- Disconnect the Charger (11) from the main power outlet.
- Unplug the Charger Connector (13) from the Battery Box (10) and store the Charger in a cool and dry place.
- Reconnect the Power Plug (6) to the Battery Box. The Powertilt is ready to be used.

Parking the system

IMPORTANT: When not using the system for a day or more, unplug the Power Plug.
The controller uses a small amount of power while connected to the battery. If left for an extended period the controller will drain the battery completely, possibly resulting in damage to the battery. Unplugging the power cord will prevent the battery from being drained.

Trouble shooting

What to do when the Powertilt is not working?

- Check the power level of the Battery with the Charger. See “Charger Feedback’ for more information.
- If the battery is still empty after a minimum of 10 hours of charging, 1) Check the Charger Fuse (14). Replace it when it is broken (broken wire, dark spots in the centre of the Fuse), 2) contact your dealer.
- Check the Connectors (4, 5, 6) (see ‘*Checking the Components’*). Are they plugged in correctly and are they free of corrosion?
- Check the Input Switch(es) (8). Is it (are they) plugged in fully?

What to do when the seat stops tilting before reaching maximum tilt?

- Check if anything is obstruction the Seat or the Actuator. Consult your dealer if the Seat interferes with parts of the wheelchair. Do not move or remove any wheelchair parts!
- Check the position of the Tilt Limiter. For reaching 50° tilt it must be set at or higher than a 50° angle (see *‘Setting up the Tilt Limiter’*).
- Check the mounting position of the Actuator Mounting Block (16). If the Actuator could be sitting lower, then the Actuator Mounting Block is installed up-side-down. Reinstall the Block.

What to do when the seat is stuck in a tilted position?
The seat should always be able to tilt back to a horizontal position. The tilt limiter only effects the extension of the actuator not the retraction so it can be eliminated as

a possible reason for failure. Check the battery life, connectors and wire conditions to ensure everything is correct

If none of the suggested solutions solve the problems, please contact your dealer.